Montana Board of Oil and Gas Conservation

Scope of Work

for the Development of a Procedures Manuals and a Field Inspection System

DNRC MOU 128220
Montana Tech of the University of Montana

Concerns from the Audit

- 1. Inspection procedures, documentation and risk prioritization (Recommendations 1, 2, 3)
- 2. Timelines and guidelines for policy enforcement and corrective actions (Recommendation 4)
- 3. BOGC compliance with State of Montana IT policies (Recommendations 5, 6 and 7)

Proposed — Two-Phase Project

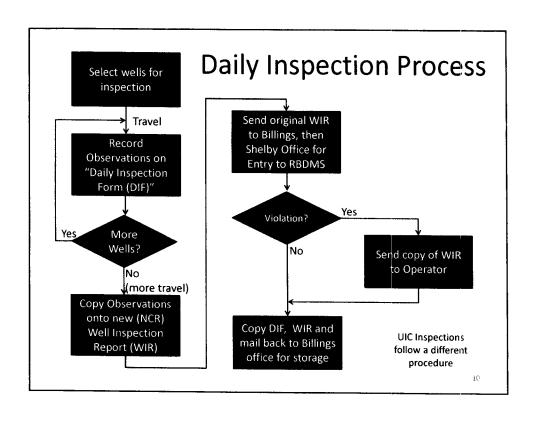
- Phase 1 Develop scope-of-work
 - Review pertinent documents
 - · Existing procedures documentation, forms
 - Report from the Legislative Audit Committee
 - EPA UIC manual
 - Applicable Montana Regulations
 - Write specifications
 - · Recommended deliverables
 - · Estimate of effort
 - Draft of RFQ
- Phase 2 Implement

3

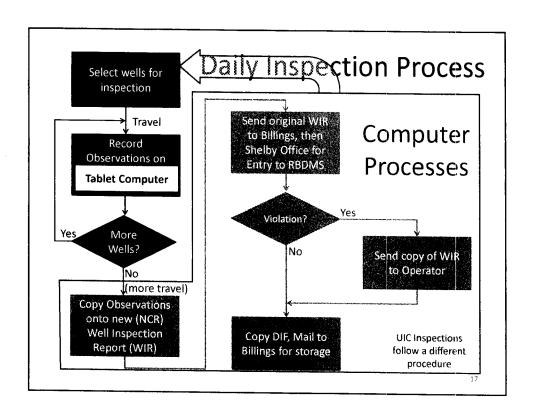
Methods

- Review of current BOGC documents
- Ride along Field Supervisor Gary Klotz
- Conference calls BOGC personnel
- Private interviews Field inspection personnel
- Discussions with Lisa Blanford LAD
- Contact with players in enforcement and inspection
 - Texas
 - Colorado
 - North Dakota
 - Ground Water Protection Council

5



_	_	NCCOIIII	IC	110	10	Δ	ternatives			
	¥	Path I - Develop Manual then Computer-assisted System	Es	t Ho	urs		Path II - Develop Computer-assisted System	Es	t Hou	ırs
6	43	Task	Tech Writer	S/W Engr	O&G Dlv	Path Proc Sub-Proc		Tech	s/w	08.0
		Decree of the second						Writer	Engr	Div
A		Montana paper Field inspection Procedures Manual (FIPM) and associated study of computer forms					mputer forms with manual ambedded in help! Research Colorado and other states computer forms systems, write concept of	30	80	20
H	1.	Research and write paper manual	160	40	20		operations document and get buy-in from			
1	III.	Research Colorado and other state's computer forms systems for similarities and	20	40	5		all stake holders			
		difference with Montana procedures and regulations as embodied in the paper manual				ii.	Write field inspector's user manual, system administration manual, and software requirements specification for Montana	40	100	5
В		Adaptation/implementation of computer forms system with on-line help edited from manual					Computer Forms Oil and Gas Inspection System; and get approval and budget for	!		
Ц	1.	Write concept of operations document and get buy-in from all stake holders		40	5	iii.	adaptation/implementation. Software design document, implementation	40	100	0
) ii.	Write field inspectors user manual, system administration manual, and software requirements specification for Montana Computer Forms Oil and Gas Inspection	40	100	5		(with Montana inspection help) and usability testing at Montana Tech. Write Installation and SysOps Manual for SITSD.*			
\perp		System; and get approval and budget for adaptation/implementation.				ív.	Delivery of Montana Computer Forms Inspection system to O&G Division and	16	16	16
	1	Software design document, implementation (with Montana inspection help) and usability testing at Montana Tech. Write Installation and SysOps Manual for SITSD*	40	100	0		SiTSD Total Hours Total Estimated Hours -		296	41 46
	iv.	Delivery of Montana Computer Forms Inspection system to O&G Division and SITSD	16	16	16		votal Estimated Hours			40





SNaP

A Survey of Native Proppant Resources within Montana

A proposal to:

Oil and Gas Conservation Division

Department of Natural Resources and Conservation

PO Box 201601

Helena, MT 59620-1601

Proposed by:

Department of Petroleum Engineering and

Montana Bureau of Mines and Geology Montana Tech of the University of Montana 1300 W. Park St Butte, MT 59701



SNaP: A Survey of Native Proppant Resources within Montana

20 Jan 2012

Executive Summary

Hydraulic fracturing is the process of inducing conductive fractures in oil and gas reservoirs. The process is critical to the economic feasibility of more than 80% of oil and gas wells drilled today and without which the development, for example, of the Bakken Formation in eastern Montana would not have been possible.

The Petroleum Engineering Department, in collaboration with the Montana Bureau of Mines and Geology (MBMG), seeks to initiate a survey of the State of Montana for material suitable for use as a proppant in hydraulic fracture stimulation operations. This project would provide the State of Montana as well as players in the oil and gas industry with publicly-available information on the location and quality of potentially economic deposits of proppant-grade material.

If this effort is successful and deposits of appropriate material are located that are beyond those currently known, it is very likely that the effort will create a large positive impact on the economy of this State. The expected market for frac sand in just that portion of the Bakken formation within Montana is nearly \$25 million annually. The total annual market in the Bakken, including North Dakota, approaches a quarter of a billion dollars.

Background

Proppant is the name given to both natural and man-made sand-like materials used to hold open fractures created in oil and gas wells during fracture stimulation ("fracing".) Many different types of proppants have been used in the process of hydraulic fracture stimulation ranging from walnut shells to sophisticated (and expensive) man-made materials. However, the most common proppant by far is naturally occurring sand.

Reports published by RigData indicate that a quarter of a million oil and gas wells were started in 2010, up from about 160,000 in the previous year. In order to be economic, most of those new wells require fracture stimulation. And, because large amounts of frac sand is required for each well — it is not uncommon for 100,000 lbs of material to be pumped into a well — a huge demand has developed for this material. In spite of the extraordinary costs, operators have been known to import material from China. Putting these numbers together leads to a conservative estimate that billions of pounds (10°lb) of frac sand were pumped into the ground in 2010. . . just in the United States.

Locating sources of proppant inside Montana would have the dual effect of reducing transportation costs to fields in Montana (such as the Bakken in the eastern part of the State) and it would stimulate significant economic growth. As our energy needs continue to grow, so too will the demand for this material. It is estimated that the potential market for proppant in the Bakken formation will surpass \$210 million in calendar year 2012. Detailed analysis is provided in the appendix.

The Petroleum Department and the MBMG have gained confidence that such deposits can be identified within Montana. Several unsolicited samples brought to us have proven to qualify per the American Petroleum Institute (API) standards.

There are a number of potential sources that deserve a look. The following list was compiled for this proposal by geologists at the MBMG.

High-energy marine deposits and marginal marine sand-dune deposits are the most likely possibilities for quartzose sandstone with well- rounded and spherical grains. The following are those types of deposits in Montana that can have variable degrees of cementation. Thicknesses are for the entire stratigraphic unit, not just the sandstone.

- Virgelle Formation—White to light gray, fine- to coarse-grained, locally titaniferous, quartzose sandstone. Marine shoreface and foreshore environments. Central and northwestern Montana, but northwestern Montana Virgelle is probably better possibility. Thickness as much as 90 m.
- Fall River Formation—Gray and brown, fine- to medium-grained, quartzose sandstone with thin interbeds of dark gray shale at top. Nearshore marine environment. Southcentral Montana. Thickness as much as 70 m.
- **Flood Member of Blackleaf Formation**—Quartzose basal sandstone with interspersed limonite flecks. Nearshore marine environment. Central and southwestern Montana, but southwestern Montana Flood is probably better possibility. Thickness as much as 230 m.
- **Sunburst Member of Kootenai Formation**—Well sorted, quartzose sandstone with interspersed limonite specks. Nearshore marine environment. Great Falls area. Thickness as much as 30 m.
- **Goose Egg Formation**—Red shale and sandstone with some interbeds of anhydrite, gypsum, and limestone. Nearshore marine, marine, and restricted marine environments. Pryor and Bighorn Mountains. Thickness 30 m.
- **Quadrant Formation**—Very light gray, yellowish or pinkish, well-sorted quartzose sandstone or quartzite, locally interbedded with subordinate limestone beds. Marine environment. Western Montana. Generally thickness as much as 140 m, but as thick as 800 m in southwesternmost Montana.
- **Tensleep Formation**—Very light gray sandstone interbedded with subordinate carbonate, shale and anhydrite. Cyclical marine, eolian, and sabkha. Pryor and Bighorn Mountains. Thickness about 60 m.
- Cameron Creek Member of Tyler Formation—Red, purple, and brown quartzose sandstone with subordinate gray shale and limestone. Central Montana. Thickness 25-65 m.
- **Greybull Member of Kootenai Formation**—Light brownish gray, fine- to medium-grained, well sorted, clean quartzose sandstone with interspersed limonite flecks. Occurs as channel fill in Pryor and Bighorn Mountains. Thickness as much as 75 m.

A map showing the location of outcrops containing material potentially of interest to this survey is presented in the appendix.

SNaP Project Description and Methodology

The Petroleum Department, in cooperation with the Montana Bureau of Mines and Geology (MBMG), seeks funding to support a study to determine the quality, an estimate of the extent and location of deposits of proppant-grade material within Montana.

The project will consist of a total of five phases as identified below.

Part 1 - Initial Survey of Potential Sources (Year 1)

Phase I — Planning field work

The first step in the project will be to gather information on potential formations from the literature and subject experts at the MBMG. Geologic and topographic maps as well as any available imagery will be utilized to select areas for initial field examination. A very important component of this will be Susan Vuke's experience in mapping sandstones in central and eastern Montana and Dick Berg's experience along the Rocky Mountain Front.

Phase II — Initial field examination of potential formations

- 1. Those areas of best exposure and accessibility of the formations selected as determined in Phase I will be examined. This preliminary reconnaissance will involve examining outcrops for friability and assessment of the quartz content and sedimentary maturity of the sandstone.
- 2. Exposures will be photographed and selected grab samples will be collected. Field notes and photographic records will be up-loaded in near real time, to speed recordkeeping for later lab analysis.
- 3. Judgment will be made on sites suitable for obtaining channel samples. Permission to collect channel samples will be obtained if necessary.
- 4. Laboratory analysis will grade these initial samples as to their suitability for use as proppant.
- 5. Sites for additional sampling will be selected based on the potential for production of proppant-grade material.

<u>Part 2 – Detailed Sampling to estimate deposit size, improve estimate of quality (Years 2 and 3)</u> <u>Phase III</u> — First round of channel sampling

- 1. At the sites selected in Phase II, channel samples will be collected in increments of 5 feet for either the thickness of the formation or through the interval that is sandstone.
- 2. The completed channel will be marked to identify channel breaks, photographed and the data linked to servers at Tech.
- 3. The resulting samples will be evaluated in the lab.
- 4. A comparison will be made between the grab samples obtained in Phase II and the channel samples collected in this Phase III. This will inform a review of the site selection to reduce the likelihood that economic deposits are overlooked.
- 5. Sites for additional sampling (Phase IV) will be selected with the goal of confirming the initial results and extending testing to identify the boundaries of the deposit.

Phase IV — Second round of channel sampling

- 1. After the samples gathered during the first round (Phase III) have been tested per the API procedures additional channels will be cut in those formations or areas that appear most promising. These sites will be picked not only on the basis of the test results, but also by going back to observations made during Phase II.
- 2. These new samples will be analyzed for appropriate characteristics.

Phase V — Preparation of final report for publication

- 1. Using the laboratory test data provided by Petroleum Engineering and geologic information from the MBMG, a map will be created that will identify the formation, outcrop location, proppant characteristics and estimated extent of deposits.
- 2. Educational materials on working with developers and navigating the State of Montana regulations will be developed.
- 3. Results of the study will be forwarded to landowners and mineral rights owners who permitted sampling on their land.
- 4. Project results will be published electronically on the MBMG website.
- 5. The proppant data base will be advertised by submission of articles contributed to trade magazines, technical journals and conference presentations.

Much of the work for this project will be completed by students at Montana Tech under the guidance of academic faculty and MBMG personnel.

Budget

Funding is being requested for Part 1 (Phases I and II) to determine the existence of potential source formations. If potential source formations are identified, additional funding will be request for Part 2.

1. A majority of the requested funding is for support of field and lab personnel conducted primarily by students at Montana Tech. This portion makes up about half of the total personnel costs..

The two principle investigators, John Getty and Dick Berg will charge a total of 11 months of salary over the three year life of the project. Mr. Getty intends to continue teaching full time and will be charging two month's salary to the project over each of the three years. In each of the project fiscal years, one of those months will be in the summer and the other will be spread out as an overload during his regular 10-month-long academic contract. His primary responsibility will be directing and supervising lab analysis of the proppant samples.

The five month's salary for Dr. Berg (or his replacement upon his retirement) will be used as a buy-out from his regular duties at the MBMG over the three year life-span of the project. He will be primarily in charge of supervising the field crews that will be sampling the relevant formations.

Two weeks of time for Mr. Robin McCulloch are included to assist with training students in sample preparation.

Mapping and GIS services required for preparation of the results for public dissemination are budgeted for MBMG staff. One and ½ months salary in Year 3 is budgeted for this purpose.

- 2. Most of the travel budget will be used to offset the cost of the field sampling program. Sampling is expected to take a total of 100 days. An average of 200 miles per day is assumed to estimate motor vehicle costs. Sixty nights are planned at hotels to maximize the travel efficiency. The remainder will be set aside to cover costs for travel to conferences and presentations to publicize the study.
- 3. The supplies budget will be used to acquire the needed non-capital items. Channel samples with be obtained from formations in the field using a chisel hammer/generator set. Two are required since there will be two field teams working simultaneously. iPads will be utilized to provide both photographic and written descriptions of the samples.
 - The remainder of the items in the Supplies category will enhance the existing capacity of the proppant lab in Petroleum Engineering. Because of the large number of samples that are expected, some of the requested equipment will allow parallel processing to occur, maximizing the efficiency of the lab personnel.
- 4. The equipment budget includes capital items required to achieve a sample throughput capacity sufficient to keep up with the volume of material expected from the field. The storage unit is a cargo container, modified with a man-door at the center and storage racks. This unit will be used to provide long term storage for the samples acquired.

A budget spreadsheet detailing these expenditures is presented in the appendix of this document.

Summary

Demand for proppant-grade sand is increasing at an exponential rate. Proppant is in such short supply that oil and gas operators are seeing well completions constrained by the amount and the quality of the proppant that is available. Manufacturers are ramping up to meet demand using an artificial proppant material but the cost of this material is high and availability is still low.

The deliverables of this project will be educational materials made available to the students at Montana Tech, residents of the State of Montana and interested businesses worldwide.

If, as we suspect, suitable deposits within Montana can be located the burgeoning demand will spur both home-grown businesses and could even attract investment from out-of-state companies currently in the business. The Petroleum Engineering Department and the Montana Bureau of Mines and Geology are ideally situated to help make that happen.

Contact information:

John Getty, Instructor and Lab Director Petroleum Engineering Montana Tech 1300 W. Park St Butte, MT 59701 jgetty@mtech.edu (406)496-4847 Richard Berg, PhD, Senior Research Geologist Curator, Mineral Museum Montana Bureau of Mines and Geology 1300 W. Park St Butte, MT 59701 dberg@mtech.edu (406)496-4172

APPENDIX

Proposed Budget

SNaP Budget - Evaluating Proppant Sources within Montana

Item	Description	Qty	Monthly	Base	Part 1	Part	2	Total
1	Personnel (amounts include benefits)		Rate	Salary	Yr 1	Yr 2	Yr 3	
1.1	John Getty, Pet Engr, PI (1 month summer salary Yr 1, Yr 2 & Yr 3)	3	6,441	64,407	\$0	\$13,268	\$6,827	\$20,095
1.2	John Getty, Pet Engr, PI (1 month AY Extra Compensation Yr 1, Yr 2 & Yr 3)	3	6,441	64,407	\$6,441	\$6,634	\$6,827	\$19,902
1.3	Dick Berg, MBMG, Co-PI (3.5 mo/Yr 1, 1mo/Yr 2, .5mo/Yr 3)	5	6,116	73,388	\$15,289	\$12,598	\$3,241	\$31,129
1.4	Robin McCulloch (.25mo/Yr 1 & .25mo/Yr 3)	0.5	4,982	59,778	\$1,245		\$1,320	\$2,565
1.5	GIS and graphics (1.5 months / Yr 3)	1.5	3,772	45,264			\$5,997	\$5,997
1.6	4 Students (10 hrs/wk @ \$10/hr during AY, 40 hrs/wk@10/hr Summer)				\$13,200	\$39,600	\$33,600	\$86,400
1.7	Benefits (46% Professionals)				10,569	14,950	11,138	\$36,657
1.8	Benefits (students 3 % AY & 10% Summer)				\$1,472	\$2,352	\$2,352	\$6,176
	TOTAL SALARY & BENEFITS				\$48,216	\$89,402	\$71,303	\$208,921
2.1	Travel Field work, per diem (5 ppl, 100 days)	500	\$23		\$5,000	\$5,000	\$1,500	\$11,500
2.2	Field work, lodging (3 rooms, 60 nights)	180	\$77		\$6,000	\$6,000	\$1,860	
2.3	Field work, mileage (200 miles/day)	20000	\$0.36		\$3,300	\$3,300	\$600	\$13,860
2.4	Presentations/Conferences (2 ppl)	2	\$2,500		33,300	\$1,500	\$3,500	\$7,200 \$5,000
	TOTAL TRAVEL		\$2,500		\$14,300	\$15,800	\$7,460	\$37,560
					1 42 9333	+/	V.,	737,300]
3	Supplies		r					
3.1	Chisle Hammer and generator	2	\$1,500		L	\$3,000		\$3,000
3.2	Drying Oven	1	\$4,000		\$4,000			\$4,000
3.3	Crush cell	1	\$3,000		\$3,000			\$3,000
3.4	Lab Supplies (per year)	3	7 7		\$2,000	\$2,000	\$2,000	\$6,000
3.5	Sieve set	2			\$1,500	\$:1,500		\$3,000
3.6	Gram scales	2			\$1,200			\$1,200
3.7	iPads for field notes and photo-documentation	3	\$600		\$1,800			\$1,800
	TOTAL SUPPLIES	<u> </u>	1		\$13,500	\$6,500	\$2,000	\$22,000
4	Equipment							
4.1	Load frame	1	\$25,000		\$25,000	1	Т	\$25,000
4.2	Sieve Shaker	1			,=,,,,,,,	\$5,000		\$5,000
4.3	Storage Unit	1	\$8,000			\$8,000		\$8,000
	TOTAL EQUIPMENT				\$25,000	\$13,000	\$0	\$38,000
5	Facilities & Administrative (25% of Total Direct Costs)							
5.1	F & A's	25%	TDCs		\$25,254	\$31,176	\$20,191	\$76,620
	TOTAL EQUIPMENT				\$25,254	\$3:1,176	\$20,191	\$76,620

Project Expenses Overhead (State rate 25%)

Project Cost

Part 1	Pa	rt 2	
Yr1	Yr2	Yr3	Total Project
\$ 126,270	\$ 155,878	\$ 100,954	\$ 383,101
25,254	31,,176	20,191	76,620
101,016	124,702	80,763	306,481

Market analysis

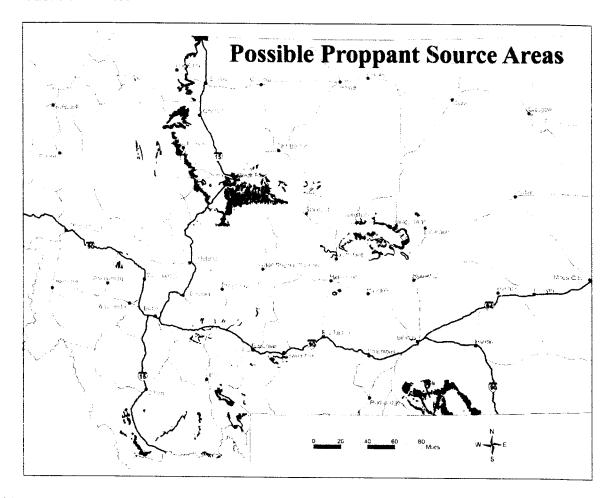
The table below provides an estimate of the size of the market for proppant in the Bakken field. Additional proppant requirements for wells that are outside of the Bakken are not included in the estimate and would increase the expected market size. The well and frac sand volume data was obtained from the North Dakota Industrial Commission, Department of Mineral Resources, Oil and Gas Division and the Montana Board of Oil and Gas Conservation.

Gross value estimates were obtained from US Silica and are for Ottowa White 20/40 proppant. The profit margin used in calculating net profit was estimated and is based on a profit level sufficient to make the enterprise attractive to industry.

Estimates on Frac sand requirements for Bakken drilling

	Unit	-			
	Cost	ND DNR*	MT BOGC	Total Mkt	
new wells per year		1,667	200	1,867	wells/yr
frac sand per well (lbs)		3,000,000	3,000,000		•
frac sand per well (tons)		1,500	1,500		
annual projected total consumption (tons)		2,500,000	300,000	2,800,000	tons
Gross value @ \$75 per ton	75	187,500,000	22,500,000	210,000,000	Processed
Net profit @ \$10 per ton (mine mouth)	10	25,000,000	3,000,000	28,000,000	Net Profit

Formations of interest



This map, prepared by MBMG personnel for this proposal, shows the locations of formations that will initially be considered for inclusion in the *SNaP* project. This map will likely expand as the survey identifies additional other potential sources of proppant materials. This map does not include fluvial deposits.

SNaP

A Survey of Native Proppant Resources within Montana

A proposal by the
Department of Petroleum Engineering
and
Montana Bureau of Mines and Geology

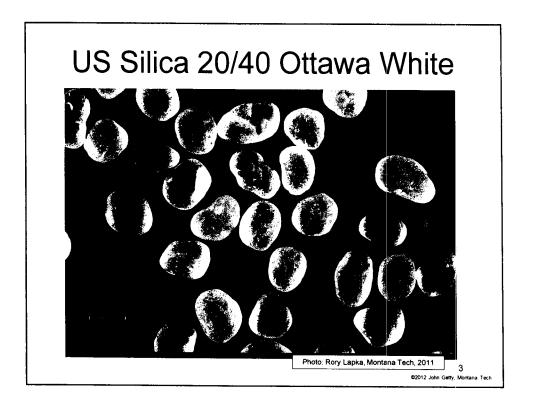
1 ©2012 John Getty, Montana Tech

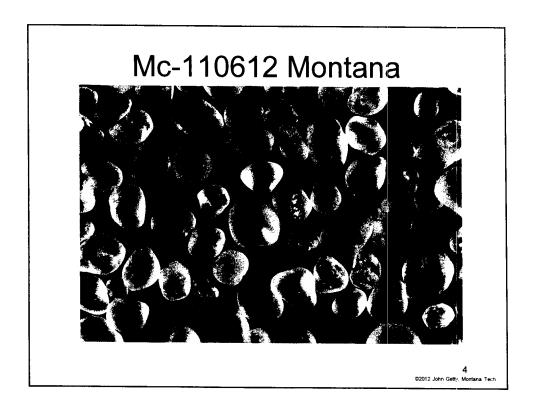
Types of proppant

Three general categories:

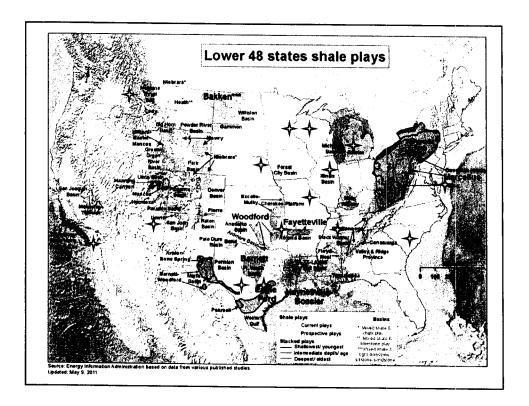
- 1. Natural (sands)
 - Northern White (Ottawa)
 - Brown (Brady)
- 2. Ceramics (manufactured)
 - LWC
 - ISP, HSP (and high density)
- 3. Other
 - · Light weight polymers

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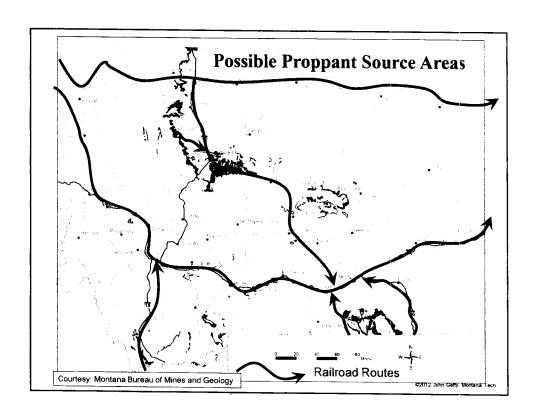
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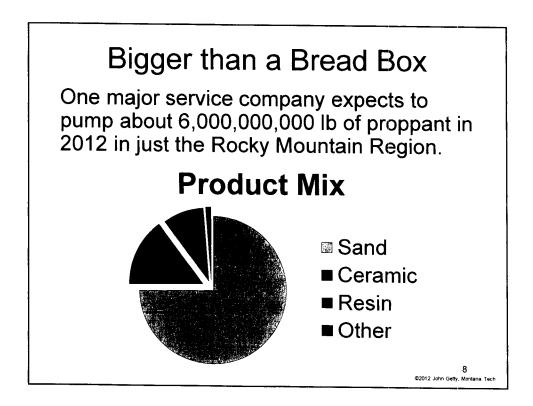


Sand, Sand Everywhere

- There are currently no fully-developed proppant sources within Montana
- Demand is outstripping supply
- Demand is expected to increase
 - Bakken is bigger than Prudhoe Bay
 - Other plays are being evaluated
- Montana is ideally situated if sources of frac sand are found

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Economics of Frac Sand in the Bakken

	ND DNR	MT BOGC	Total Mkt	
New wells per year	1,667	200	1,867	wells/yr
frac sand per well (lbs)	3,000,000	3.000.000		lbs
annual projected total consumption (tons)	2,500,000	300.000	2,800,000	tons
Gross value @ \$30 /ton (Mine mouth)	\$75,000,000	\$9.000,000	\$84,000,000	Processed for sale
Net profit @ \$5/ton (Mine mouth)	\$12,500,000	\$1,500,000	\$14,000,000	Net Profit

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Two Part Project

Expenditure	Part 1	Par	t 2
Experientale	Yr1	Yr2	Yr3
Personnel	\$48,216		
Travel	\$14,300		
Supplies	\$13,500		4 701/4
Equipment	\$25,000	11.049	(.fg)
Fac & Admin (IDC 25%)	\$25,254	331 1762	520 1973
Totals	\$126,270	Malakka	1300000

Part 1 - Initial Survey of Potential Sources (Year 1)

Part 2 – Detailed Sampling to estimate deposit size, improve estimate of quality (Years 2 and 3)

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SNaP Survey of Native Proppant

Collaborative effort between Montana Bureau of Mines and Geology, Petroleum Engineering

- · Use existing geological maps to identify access to outcrops
- Collect and evaluate samples
- Produce and publish a map product that can be used for development of resources.

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Contact Information

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Butte, MT 59701

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CONCERNING SPACING UNIT SIZE AND ALIGNMENT

I AM MAKING THIS STATEMENT ON BEHALF OF NUMEROUS PEOPLE AND OTHER FRIENDS
AND FAMILY TRUSTS THAT HAVE MINERAL INTERESTS IN MONTANA, PRIMARILY
PEOPLE IN M.F.B., NEMLMOA.

WE WOULD LIKE TO SEE SPACING UNITS COMPRISED OF TWO HALF SECTIONS,
ESPECIALLY WHEN GEOLOGISTS SAY LATERALS ONLY DRAIN 500 FT. PERPENDICULAR
TO LATERAL BORES. IT WOULD STILL ACCOMMODATE TWO MILE LATERALS WITHOUT
TIEING UP EXCESSIVE ACREAGE FOR LONG PERIODS, THAT COULD OTHERWISE BE
RELEASED. REASON IS THAT IT COULD BE A LOT OF YEARS BEFORE THE ORIGINAL
DRILLER GETS BACK TO COMPLETE THE INFILLS.

IN A RECENT CASE THE COMPANY THAT DRILLED A WELL IN EACH OF THREE SPACING UNITS (3840 acres) --SUBSEQUENTLY SOLD OUT TO ANOTHER COMPANY THAT INTENDS TO USE THE INCOME FROM THOSE WELLS TO FINANCE THEIR DEVELOPMENT OF NEW LEASES IN THE BASIN. THEIR LAND DEPARTMENT EXPECTS THAT THEIR NEWLY ACQUIRED DEVELOPMENTS WILL TAKE YEARS TO COMPLETE, BASED ON PRESENT TIME LINES OF PROGRESS.

ANOTHER COMPANY CEO STATED THAT HIS COMPANY EXPECTS THAT IT WILL TAKE ABOUT 11 YEARS TO COMPLETE THEIR INITIAL DRILLING IN EASTERN MONT--MAINLY ROOSEVELT, RICHLAND AND SHERIDAN CO. IN THAT CASE A SMALL PRODUCING WELL COULD TIE UP GREATER PRODUCTION IN SAME SPACING.

DWIGHT E. VANNATTA 6740 HWY 327 BAINVILLE, MT 59212

406-769-2156 HOME 406-769-7156 CELL CONCERNING NOTIFICATION OF PEOPLE OR ENTITIES THAT HAVE SURFACE OR MINERAL INTERESTS IN SPACING UNITS OR DRILLING PERMIT APPLICATIONS

NUMEROUS PEOPLE THINK THAT THE PRESENT NOTIFICATION RULE OUGHT TO BE

AMENDED BY ADDING THAT ALL SURFACE AND MINERAL OWNERS IN, AND ADJACENT

TO, SPACING UNITS OR DRILLING PERMIT APPLICATIONS, BE NOTIFIED IN WRITING

SIMULTANEOUS TO THE PUBLIC NOTICE. THE TIME FRAME SHOULD BE AT LEAST

THIRTY(30)DAYS INSTEAD OF TEN (10) DAYS. EVEN THOUGH THEY MAY NOT HAVE

EQUAL SHARES, THEY DO HAVE AN EQUAL RIGHT TO KNOW. THIS STATEMENT COMES

BECAUSE THERE HAVE BEEN INSTANCES WHERE THE SMALLER INTEREST OWNERS HAVE

BEEN IGNORED UNTIL OIL COMPANIES WERE FORCED TO NOTIFY OR TO CONTACT THEM,

HOPING NOT TO HAVE TO PAY THEM FOR ANYTHING.

DWIGHT VANNATTA 6740 HWY 327 BAINVILLE, MT. 59212

HOME 406-769-2156 CELL 406-769-7156

THIS COMMENT AND REQUEST IS ALSO ON BEHALF OF VIRGINIA NILES OF BILLINGS, MT AND ROCKY NILES OF FAIRVIEW, MT.

COMMENT

QUESTION

IT WAS MY UNDERSTANDING THAT A WATER PERMIT FOR OIL OR GAS EXPLORATION OR IN HIGHWAY CONSTRUCTION COULD BE ISSUED VERY QUICKLY, BUT THE D.N.R.C. INFORMED ME THAT IT COULD TAKE UP TO SIX (6) MONTHS OR MORE, AND TO CHECK WITH ONE OF THE SEVEN STATE ENTITIES THAT PLAY A ROLE IN ADMINISTERING MONTANA WATER RIGHTS AND STATEWIDE WATER ADJUDICATION. THAT PROCESS LED TO A "TEMPORARY PERMIT" FOR WATER USED FOR OIL OR GAS EXPLORATION OR IN HIGHWAY CONSTRUCTION, BUT IT HAS A PREDETERMINED EXPIRATION DATE. MAYBE, AN "INTERIM PERMIT" COULD BE ISSUED SOONER WHILE THE "PROVISIONAL PERMIT" IS PROCESSED UNDER 85-2-311 MCA. HOWEVER, IT MAY BE POSSIELE FOR A STATE AGENCY TO INFLUENCE THE D.N.R.C. TO PRIORITIZE AND EXPEDITE THE WATER PERMIT APPLICATIONS FOR OIL OR GAS EXPLORATION, LIKE THE HIGHWAY DEPT EXPEDITES WATER PERMITS FOR HIGHWAY CONSTRUCTION. WOULD THE BOARD CONSIDER WRITING A LETTER TO THE D.N.R.C. AND REQUEST THEM TO PRIORITIZE AND EXPEDITE WATER APPLICATIONS FOR OIL OR GAS EXPLORATION BECAUSE THERE IS A BACK LOG FOR FRACING AND A DIRE NEED FOR FRAC WATER? PLEASE SERIOUSLY CONSIDER THIS REQUEST, BECAUSE SOME OF THE WATER WELLS

PLEASE SERIOUSLY CONSIDER THIS REQUEST, BECAUSE SOME OF THE WATER WELLS
THAT HAVE BEEN USED FOR FRACING ARE NOW BEING USED FOR IRRIGATION, THUSLY
LESS FRAC WATER. ALSO, COMPOUNDING THIS SITUATION, IS THE SHORTAGE OF WATER
IN ND THAT WILL EVENTUALLY STOP WATER COMING FROM ND TO FRAC MONTANA OIL
WELLS.

THANK YOU

DWIGHT VANNATTA 6740 HWY 327 BAINVILLE, MT

HOME 406-769-2156 CELL 406.769-7156

FINANCIAL STATEMENT
As of 61/12
Percent of Year Elepsed: 92

						FY12 Budget	FY12 Budgel vs Expenditures							
	2012 Regulatory Budget	Expends	Expends % of Budget	2012 UIC Budget	Expends	Expends % of Budget	2012 Education Outreach	Expends	Expends % of Budgel	2012 EPA CO2 Primacy	Expends & of Budget	2012 TOTAL BUDGET	2012 TOTAL EXPENDS	Expends % of Budget
	17.0			. s								20 \$		•
Oby 1000 General PS	(2,133)											(2.133)	ଚ	
Salaries Other Come	1,075,334	752,143 2,889	0.70	185,181	158,362	Ę.						1,322,355	5 963,169	9 0.73
	,			61,518	•									
		•		(9,884)					-			(9.884)	_	
ŏ	531,225	97,561	0 18	66,135		0.20	1,500,000	6,556	8	250,000		2,347,360		9 002
Communications	53,019	48,745	1 12	9,526	10,049	8 8			******		•••	62,545	5 58,794	
	32,092	29,205	160	6,612		0.75						38,70		
i00 Rent	17,769	15,668	0.88	2,353		1 32						20,12		8 0 93
ioo Urinhes	11,908	15,081	127	2,464		131						14,37	2 18,313	
	8,722	13,932	1 43	2,896		1 15			,			12,61		137
ō	28,857	28.893	8	16.909		950						45.76		
00 Equipment 00 Grants	35.575	14,509	0 41	12.500	11,211							48.07	5 25,720	
Totat	1,832,850	1,064,942	0.58	363,760	271,921	0.75	1,500,000	6,556	9000	250,000		3,945,610	1,343,419	0.34
ELINDING			- 5	000			80	339 3	d					
State spectal Federal	7 6 6 7	3	 6 0	107,551	27.750	92 92	000,000,	3 0 0	>			920,953,5 107,551	27.750	5
Total Funds	1,819,114	1,084,942		363,760	271,921							3,946,610	1,343,415	

FY10 Carryforward		FY 11 Carryforward	
Org 2018	-	Org 2021	
slart balance	122,991	start balance	191,319
das sen	(1,250)		
current bat	121,741		

REVENUE INTO STATE SPECIAL	REVENUE ACCOU	NT 6/1/12	
	FY12	FY11	Percentage FY12:FY11
Oil Production Tax	1,892,587	1,562,946	1.21
Gas Production Tax	233,675	265,464	0.88
Drilling Permit Fees	62,850	54,300	
UIC Permit Fees	219,400	208,650	
Enhanced Recovery Filing Fee		,	
Interest on Investments	11,281	40.332	0.28
Insurance Proceeds	1,160	-	
Accomodations Tax Rebate		491	
Copies of Documents	6,821	7,496	0.91
Miscellaneous Reimbursemts	246	25,300	-
TOTALS	\$ 2,428,019	\$ 2,164,979	1.12

REVENUE INTO DAMAGE MITIGAT	TION ACCOUNT as of 6/1/1
	FY11
Transfer in from Orphan Share	0
RIT Interest	0
Bond Forfeitures	0
Reimburse for Fencing (Segelman)	2,800
Interest on Investments	833
TOTAL	\$ 3.633

REVENUE INTO GENERAL FUND FR	OH CINED - COURS	
REVENUE INTO GENERAL FUND PR	OM FINES as 01 6/1/12 FY12	
Brandon Oil	20	
Kelly Oil & Gas LLC	10	
Hofland, James D	20	
Hofland, James D	80	
Slohein Inc.	10	
Slawson Exploration Co	· -	
McOil Montana One LLC	5,000	
Misc. Oil Co	120	
Phoenix Energy Inc.	10	
Mountain Pacific General	90	
	4,900	
Justice Oilfield Water Service Inc	20	
Valerie Wadman (Frank Miller)	10	
ECA Holdings LP	10	
Coalridge Disposal & Petroleum	10	
SBG Sheridan Facility	1,000	
Southside Oil & Gas LTD	40	
Hawley Oil	340	
Native American Energy Group	100	
Grey Wolf Production Company	50	
August Energy Services LLC (Jake Oi	30	
Grey Wolf Production Company	50	
Phoenix Energy Inc.	90	
Mountain Pacific General Inc	1,040	
Lyon Oil	120	
Bensun Energy	5,000	
August Energy Services LLC (Jake Oi	1,100	
Frank Baxter	5,000	
Brandon Oil	70	
R.F. Parsell Partnership	60	
JH Oil Co	80	
James D. Hofland	130	
Quinque Oil	80	
Harry Knaup	70	
Roland Oil & Gas	30	
Bensun Energy LLC	60	
Slochcin Inc	70	
Refund Frank Baxter	(5,000)	
ECA Holdings LP	60	
CW Shay	70	
Hawley Oil	300	
Jack Grynberg	70	
Cut Bank Gas	100	
L&B Well Service (Poor Boy Oil)	2,500	
Native American Energy Group	200	
Brent Zimmerman	1,000	
HiLine Partners	500	
Hunter Energy LLC	60	
TOTAL	\$ 24,780	
TOTAL	⊅ 24,780	

BOND FORFEITURES AS OF 6/1/12 Go into Damage Mitigation Account	- 1	
North American Technical Trading Compan MSC Exploration	0 -	60,000 10,000
TOTAL		70,000

INVESTMENT ACCOUNT BALA	NCES 6/1/12
Oil & Gas ERA	3,405,537
Damage Mitigation	377,688

GRANT BALANCES - 6/1/12			
<u>Name</u>	<u>Authorized Amt</u>	<u>Expended</u>	<u>Balarice</u>
2009 Northern	300,000	0	300,000
2009 Southern	300,000	0	300,000
2007 Tank Battery	304,847	166,048	138,799
2011Southern - TankBattery2	204,951	0	204,951
TOTALS	\$1,109,798	\$166,048	\$738,799

CONTRACT BALANCES - 6/1/12			
2012 Teachers Workshop	43,000	_	43,000
EOR Study - MT Tech	179,091	8.054	171,037
Scope of Work - MT Tech	6,250	715	5.535
Automated Maintenance Services, Inc.	27.458	16.078	11,380
Agency Legal Services - Legal	60,000	26.933	33,067
Central Avenue Mail	400	400	05,00,
Liquid Gold Well Service, Inc 09 Northern	165,000	0	165,000
Liquid Gold Well Service, Inc 09 Southern	165,000	Ô	165,000
C-Brewer - 07 & 11 Southern Tank Battery	424,650	166,048	258,602
TOTALS			
	1,070,849	218,229	85:2,620

Agency Legal Services Expen	ditures in FY12	
Case	Amt Sport	Look Sup Data
BOGC Duties	Amt Spent 26,933	Last Svc Date 04/12
Total		
	26,933	

Montana Board of Oil and Gas Conservation Summary of Bond Activity

4/24/2012 Through 6/12/2012

Approved

Antelope Resources, Inc. Billings MT		365 L1	Approved Amount: Purpose:	5/18/2012 \$4,500.00 Limited Bond
Certificate of Deposit	\$4,500.00	FIRST STATE BANK OF SHELBY		Zirriked Bolld
Comet Ridge Resources, LLC		714 M1	Approved	5/15/2012
Denver CO			Amount:	\$50,000.00
			Purpose:	Multiple Well Bond
Surety Bond	\$50,000.00	RLI INSURANCE COMPANY		
Continental Resources Inc		1550 T1	Approved	4/24/2012
Oklahoma City OK			Amount:	\$10,000.00
			Purpose:	UIC Single Well Bond
Surety Bond	\$10,000.00	RLI INSURANCE COMPANY		-
Continental Resources Inc		1550 T2	Approved	4/24/2012
Oklahoma City OK			Amount:	\$10,000.00
			Purpose:	UIC Single Well Bond
Surety Bond	\$10,000.00	RLI INSURANCE COMPANY		
East Outlook Operations, LLC		712 G1	Approved	5/10/2012
Bozeman MT			Amount:	\$10,000.00
			Purpose:	Single Well Bond
Certificate of Deposit	\$10,000.00	Stockman Bank of Montana		
Hawley & Desimon		3360 G1	Approved	5/29/2012
Conrad MT			Amount:	\$5,000.00
			Purpose:	Single Well Bond
Letter of Credit	\$5,000.00	Stockman Bank of Montana		·
lver J. Johannesen		717 D1	Approved	6/4/2012
Loring MT			Amount:	\$5,000.00
			Purpose:	Domestic Well Bond
Certificate of Deposit	\$5,000.00	The First State Bank of Malta		
Legacy Reserves Operating LP		713 T2	Approved	6/5/2012
Midland TX			Amount:	\$10,000.00
			Purpose:	UIC Single Well Bond
Surety Bond	\$10,000.00	U.S. Specialty Insurance Co.		Ç
Legacy Reserves Operating LP		713 T1	Approved	6/1/2012
Midland TX			Amount:	\$10,000.00
			Purpose:	UIC Single Well Bond
Surety Bond	\$10,000.00	U.S. Specialty Insurance Co.	·	Ü
Legacy Reserves Operating LP		713 M1	Approved	5/11/2012
Midland TX			Amount:	\$50,000.00
			Purpose:	Multiple Well Bond
Surety Bond	\$50,000.00	U.S. Specialty Insurance Co.	•	
•	755,000.00	5.5. Specially madratice Co.		

Montana Board of Oil and Gas Conservation Summary of Bond Activity

4/24/2012 Through 6/12/2012

Approved

Shale Bakken Investment Corporation		711 M1	Approved	5/7/201:
Clearmont WY			Amount:	\$50,000.00
			Purpose:	Multiple Well Bond
Surety Bond	\$50,000.00	Liberty Mutual Insurance Company		
Three Forks Resources, LLC		593 G4	Approved	5/14/2012
Denver CO			Amount:	\$5,000.00
			Purpose:	Single Well Bond
Surety Bond	\$5,000.00	Lexon Insurance Company		-
leased				
El Paso E&P Company, L.P.		624 M1	Released	5/16/2012
Houston TX			Amount:	\$50,000.00
			Purpose:	Multiple Well Bond
Surety Bond	\$50,000.00	RLI INSURANCE COMPANY		
El Paso E&P Company, L.P.		624 T1	Released	5/16/2012
Houston TX			Amount:	\$10,000.00
			Purpose:	UIC Single Well Bond
Surety Bond	\$10,000.00	RLI INSURANCE COMPANY		-
Petro-Canada Resources (USA) Inc.		475 M1	Released	6/8/2012
Denver CO			Amount:	\$50,000.00
			Purpose:	Multiple Well Bond
Surety Bond	\$50,000.00	FIDELITY & DEPOSIT CO. OF MD		
Quaneco, LLC		594 M1	Released	5/23/2012
Woodland Hills CA			Amount:	\$50,000.00
		•	Purpose:	Multiple Well Bond
Surety Bond	\$50,000.00	Markel Insurance Company		
Surety Bond	\$50,000.00	American Safety Casualty Insurance Co	ompany	